

Base de données et PAST

La structure de la base de données – données originales

VARIABLES

Mensurations

Méristiques

Information additionnelle

Code des spécimens:

- Identification des spécimens individuels.
- Dépend du but de l'étude, mais contient souvent de l'information géographique.
- De préférence bref.

SPÉCIMENS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
	Code	TL	SL	PAL	AFL	PPeL	PPcL	DFS	DFR	Scales	Vertebrae			Country	Basin	Location	Lat	Long	Number
2	AtH	11	9.85	4.45	5.474	3.774	1.802							Cameroon	Unknown	Cameroon	?	?	
3	Br01G	185.2	169.5	56.1	114.9		18.7						76	Gabon	Unknown	Gabon	?	?	1930-0032
4	Br02	132	123.9	40.3	82.7	37.9	14.6						79	Congo Rep	Unknown		?	?	1930-0143
5	Br03	178.5	162	47.5	113.3	43.8	17.3						81	Congo Rep	Unknown		?	?	1931-0044
6	Br04	203.1	186.5	59.1	135.4	53.9	20.3						80	Congo Rep	Unknown		?	?	1931-0045
7	Br05	179.8	164.7	52.1	115	48.3	19.4						79	Congo Rep	Unknown		?	?	1931-0141
8	BrH	275.79	255.16	88.94	171.64	81.89	27.6						73	Gabon	Ogooue	Ngomo, Gabon	-0.8167	9.95	
9	BS01JaK	148.9	137.61	58.89	76.12	52.44	19.88							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
10	BS02JaK	93.4	87.88	38.07	48.63	33.49	14.21							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
11	Lo01JaK	195.54	172.37	71.8	98.81	65.65	28.22							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7039
12	Lo02BomK	171.06	153.28	64.97	87.3	57.49	22.61							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
13	Lo03BomK	170.96	155.45	63.11	91.41	55.54	22.61							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
14	Lo04BomK	135.03	122.64	52.04	69.23	47.07	18.35							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
15	Lo05BomK	109.39	100.47	43.55	54.88	39.93	15.54							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
16	Lo06BomK	107.78	99.86	42.15	54.35	37.74	14.99							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
17	Lo07BomK	120.92	108.76	47.84	61.79	41.75	16.59							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
18	Lo08BomK	116.88	105.16	45.51	62.68	40.97	15.85							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
19	Lo09BomK	107.92	99.07	42.65	54.14	37.68	14.92							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
20	Lo10BomK	105.8	96.84	39.49	55.23	35.19	15.23							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
21	Lo11BomK	110.2	99.65	44.58	56.55	39.05	15.69							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
22	Lo12BomK	78.08	70.9	28.75	41.6	26.7	10.57							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
23	Lo13BomK	103.28	93.74	39.16	52.84	36	14.43							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
24	Lo14BomK	110.51	99.9	43.64	56.03	38.04	14.8							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
25	Lo15BomK	97.89	87.6	38.1	48.77	34.16	12.92							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
26	Lo16BomK	86.07	78.42	34.18	42.96	30.03	12.78							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
27	Lo17BomK	67.07	60.25	26.01	34.06	23.9	9.79							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
28	Lo18JaK	163.88	149.73	61.32	82.42	54.95	19.12							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7071
29	Lo19NjaG	187.17	170.72	74.52	100.65	69.31	28.96					64	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115	
30	Lo20NjaG	128.66	115.31	45.87	66.88	42.43	17.5					59	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115	
31	Lo21MakG	98.69	88.05	38.82	48.38	34.96	12.35							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
32	Lo22MakG	69.95	61.81	27.09	33.72	23.81	9.68							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
33	Lo23MakG	33.91	29.89	15.11	13.96	13.18	5.55							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
34	Lo24OIG	74.25	67.21	29.94	37.1	27.36	11.86							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
35	Lo25OIG	63.08	56.03	23.66	30.81	21.97	9.92							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
36	Lo26OIG	70.84	63.8	28.68	37.46	26.15	10.28							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
37	Lo27NjG	220.81	197.47	75.96	113.33	71.59	25.58							Cameroon	Sangha	Kombetiko, riv. f	?	?	76-14-P-839
38	Lo28NjoK	228.75	206.53	85.66	119.63	75.57	32.52						65	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
39	Lo29NjoK	210.73	189.61	76.59	109.59	68.77	27.81						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
40	Lo30NjoK	140.42	126.05	55.18	70.78	48.19	20.37						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
41	Lo31NjaG	62.18	53.11	25.01	26.94	21.87	10.31							Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	179086-110

La structure de la base de données – données originales

Mensurations:

- D'abord longueur totale (L_{tot}) et longueur standard (LS).
- Groupez les mensurations de la tête et celles du corps.
- Préférez les rangées dans l'ordre sur les feuilles.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Code	TL	SL	PAL	AFL	PPeL	PPcL		DFS	DFR	Scales	Vertebrae		Country	Basin	Location	Lat	Long	Number
2	AtH	11	9.85	4.45	5.474	3.774	1.802							Cameroon	Unknown	Cameroon	?	?	
3	Br01G	185.2	169.5	56.1	114.9		18.7						76	Gabon	Unknown	Gabon	?	?	1930-0032
4	Br02	132	123.9	40.3	82.7	37.9	14.6						79	Congo Rep	Unknown		?	?	1930-0143
5	Br03	178.5	162	47.5	113.3	43.8	17.3						81	Congo Rep	Unknown		?	?	1931-0044
6	Br04	203.1	186.5	59.1	135.4	53.9	20.3						80	Congo Rep	Unknown		?	?	1931-0045
7	Br05	179.8	164.7	52.1	115	48.3	19.4						79	Congo Rep	Unknown		?	?	1931-0141
8	BrH	275.79	255.16	88.94	171.64	81.89	27.6						73	Gabon	Ogooue	Ngomo, Gabon	-0.8167	9.95	
9	BS01JaK	148.9	137.61	58.89	76.12	52.44	19.88							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
10	BS02JaK	93.4	87.88	38.07	48.63	33.49	14.21							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
11	Lo01JaK	195.54	172.37	71.8	98.81	65.65	28.22							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7039
12	Lo02BomK	171.06	153.28	64.97	87.3	57.49	22.61							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
13	Lo03BomK	170.96	155.45	63.11	91.41	55.54	22.61							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
14	Lo04BomK	135.03	122.64	52.04	69.23	47.07	18.35							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
15	Lo05BomK	109.39	100.47	43.55	54.88	39.93	15.54							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
16	Lo06BomK	107.78	99.86	42.15	54.35	37.74	14.99							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
17	Lo07BomK	120.92	108.76	47.84	61.79	41.75	16.59							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
18	Lo08BomK	116.88	105.16	45.51	62.68	40.97	15.85							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
19	Lo09BomK	107.92	99.07	42.65	54.14	37.68	14.92							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
20	Lo10BomK	105.8	96.84	39.49	55.23	35.19	15.23							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
21	Lo11BomK	110.2	99.65	44.58	56.55	39.05	15.69							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
22	Lo12BomK	78.08	70.9	28.75	41.6	26.7	10.57							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
23	Lo13BomK	103.28	93.74	39.16	52.84	36	14.43							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
24	Lo14BomK	110.51	99.9	43.64	56.03	38.04	14.8							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
25	Lo15BomK	97.89	87.6	38.1	48.77	34.16	12.92							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
26	Lo16BomK	86.07	78.42	34.18	42.96	30.03	12.78							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
27	Lo17BomK	67.07	60.25	26.01	34.06	23.9	9.79							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
28	Lo18JaK	163.88	149.73	61.32	82.42	54.95	19.12							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7071
29	Lo19NjaG	187.17	170.72	74.52	100.65	69.31	28.96						64	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115
30	Lo20NjaG	128.66	115.31	45.87	66.88	42.43	17.5						59	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115
31	Lo21MakG	98.69	88.05	38.82	48.38	34.96	12.35							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
32	Lo22MakG	69.95	61.81	27.09	33.72	23.81	9.68							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
33	Lo23MakG	33.91	29.89	15.11	13.96	13.18	5.55							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
34	Lo24OIG	74.25	67.21	29.94	37.1	27.36	11.86							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
35	Lo25OIG	63.08	56.03	23.66	30.81	21.97	9.92							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
36	Lo26OIG	70.84	63.8	28.68	37.46	26.15	10.28							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
37	Lo27NjG	220.81	197.47	75.96	113.33	71.59	25.58							Cameroon	Sangha	Kombetiko, riv. f	?	?	76-14-P-839
38	Lo28Njok	228.75	206.53	85.66	119.63	75.57	32.52						65	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
39	Lo29Njok	210.73	189.61	76.59	109.59	68.77	27.81						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
40	Lo30Njok	140.42	126.05	55.18	70.78	48.19	20.37						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
41	Lo31NjaG	62.18	53.11	25.01	26.94	21.87	10.31							Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	179086-110

La structure de la base de données – données originales

Méristiques:

Groupez les comptes des différentes structures: les nageoires (les épines et rayons mous à la dorsale, épines et rayons mous à l'anale,...), les écailles (longitudinales, transversales,...), les dents,...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Code	TL	SL	PAL	AFL	PPeL	PPcL		DFS	DFR	Scales	Vertebrae		Country	Basin	Location	Lat	Long	Number
2	AtH	11	9.85	4.45	5.474	3.774	1.802							Cameroon	Unknown	Cameroon	?	?	
3	Br01G	185.2	169.5	56.1	114.9		18.7						76	Gabon	Unknown	Gabon	?	?	1930-0032
4	Br02	132	123.9	40.3	82.7	37.9	14.6						79	Congo Rep	Unknown		?	?	1930-0143
5	Br03	178.5	162	47.5	113.3	43.8	17.3						81	Congo Rep	Unknown		?	?	1931-0044
6	Br04	203.1	186.5	59.1	135.4	53.9	20.3						80	Congo Rep	Unknown		?	?	1931-0045
7	Br05	179.8	164.7	52.1	115	48.3	19.4						79	Congo Rep	Unknown		?	?	1931-0141
8	BrH	275.79	255.16	88.94	171.64	81.89	27.6						73	Gabon	Ogooue	Ngomo, Gabon	-0.8167	9.95	
9	BS01JaK	148.9	137.61	58.89	76.12	52.44	19.88							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
10	BS02JaK	93.4	87.88	38.07	48.63	33.49	14.21							Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195
11	Lo01JaK	195.54	172.37	71.8	98.81	65.65	28.22							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7039
12	Lo02BomK	171.06	153.28	64.97	87.3	57.49	22.61							Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032
13	Lo03BomK	170.96	155.45	63.11	91.41	55.54	22.61							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
14	Lo04BomK	135.03	122.64	52.04	69.23	47.07	18.35							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
15	Lo05BomK	109.39	100.47	43.55	54.88	39.93	15.54							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
16	Lo06BomK	107.78	99.86	42.15	54.35	37.74	14.99							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
17	Lo07BomK	120.92	108.76	47.84	61.79	41.75	16.59							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
18	Lo08BomK	116.88	105.16	45.51	62.68	40.97	15.85							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
19	Lo09BomK	107.92	99.07	42.65	54.14	37.68	14.92							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
20	Lo10BomK	105.8	96.84	39.49	55.23	35.19	15.23							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
21	Lo11BomK	110.2	99.65	44.58	56.55	39.05	15.69							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
22	Lo12BomK	78.08	70.9	28.75	41.6	26.7	10.57							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
23	Lo13BomK	103.28	93.74	39.16	52.84	36	14.43							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
24	Lo14BomK	110.51	99.9	43.64	56.03	38.04	14.8							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
25	Lo15BomK	97.89	87.6	38.1	48.77	34.16	12.92							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
26	Lo16BomK	86.07	78.42	34.18	42.96	30.03	12.78							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
27	Lo17BomK	67.07	60.25	26.01	34.06	23.9	9.79							Cameroon	Dja	Méséa, riv. Borr	2.8167	12.9333	P 77032.0017-0032
28	Lo18JaK	163.88	149.73	61.32	82.42	54.95	19.12							Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7071
29	Lo19NjaG	187.17	170.72	74.52	100.65	69.31	28.96						64	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115
30	Lo20NjaG	128.66	115.31	45.87	66.88	42.43	17.5						59	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115
31	Lo21MakG	98.69	88.05	38.82	48.38	34.96	12.35							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
32	Lo22MakG	69.95	61.81	27.09	33.72	23.81	9.68							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
33	Lo23MakG	33.91	29.89	15.11	13.96	13.18	5.55							Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859
34	Lo24OIG	74.25	67.21	29.94	37.1	27.36	11.86							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
35	Lo25OIG	63.08	56.03	23.66	30.81	21.97	9.92							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
36	Lo26OIG	70.84	63.8	28.68	37.46	26.15	10.28							Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659
37	Lo27NjG	220.81	197.47	75.96	113.33	71.59	25.58							Cameroon	Sangha	Kombetiko, riv. f	?	?	76-14-P-839
38	Lo28Njok	228.75	206.53	85.66	119.63	75.57	32.52						65	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
39	Lo29Njok	210.73	189.61	76.59	109.59	68.77	27.81						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
40	Lo30Njok	140.42	126.05	55.18	70.78	48.19	20.37						63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313
41	Lo31NjaG	62.18	53.11	25.01	26.94	21.87	10.31							Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	179086-110

La structure de la base de données – données originales

Information additionnelle, surtout basée sur les données de l'étiquette:

- Pays, bassin, localité exacte,...
- Numéro de collection
- Remarques sur le spécimen (propres observations)

1	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Code	TL	SL	PAL	AFL	PPeL	PPcL	DFS	DFR	Scales	Vertebrae	Country	Basin	Location	Lat	Loag	Number			
2	AtH	11	9.85	4.45	5.474	3.774					Cameroon	Unknown	Cameroon	?	?				
3	Br01G	185.2	169.5	56.1	114.9						Gabon	Unknown	Gabon	?	?	1930-0032			
4	Br02	132	123.9	40.3	82.7	37.9					Congo Rep	Unknown		?	?	1930-0143			
5	Br03	178.5	162	47.5	113.3	43.8					Congo Rep	Unknown		?	?	1931-0044			
6	Br04	203.1	186.5	59.1	135.4	53.9					Congo Rep	Unknown		?	?	1931-0045			
7	Br05	179.8	164.7	52.1	115	48.3					Congo Rep	Unknown		?	?	1931-0141			
8	BrH	275.79	255.16	88.94	171.64	81.89					Gabon	Ogooue	Ngomo, Gabon	-0.8167	9.95				
9	BS01JaK	148.9	137.61	58.89	76.12	52.44					Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195			
10	BS02JaK	93.4	87.88	38.07	48.63	33.49					Cameroon	Dja	riv. Ja, Kameroc	?	?	1903.7.28.194-195			
11	Lo01JaK	195.54	172.37	71.8	98.81	65.65					Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7039			
12	Lo02BomK	171.06	153.28	64.97	87.3	57.49					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
13	Lo03BomK	170.96	155.45	63.11	91.41	55.54					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
14	Lo04BomK	135.03	122.64	52.04	69.23	47.07					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
15	Lo05BomK	109.39	100.47	43.55	54.88	39.93					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
16	Lo06BomK	107.78	99.86	42.15	54.35	37.74					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
17	Lo07BomK	120.92	108.76	47.84	61.79	41.75					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
18	Lo08BomK	116.88	105.16	45.51	62.68	40.97					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
19	Lo09BomK	107.92	99.07	42.65	54.14	37.68					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
20	Lo10BomK	105.8	96.84	39.49	55.23	35.19					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
21	Lo11BomK	110.2	99.65	44.58	56.55	39.05					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
22	Lo12BomK	78.08	70.9	28.75	41.6	26.7					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
23	Lo13BomK	103.28	93.74	39.16	52.84	36					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
24	Lo14BomK	110.51	99.9	43.64	56.03	38.04					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
25	Lo15BomK	97.89	87.6	38.1	48.77	34.16					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
26	Lo16BomK	86.07	78.42	34.18	42.96	30.03					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
27	Lo17BomK	67.07	60.25	26.01	34.06	23.9					Cameroon	Dja	Méséa, riv. Bor	2.8167	12.9333	P 77032.0017-0032			
28	Lo18JaK	163.88	149.73	61.32	82.42	54.95					Cameroon	Dja	riv. Ja, Kameroc	?	?	P-7071			
29	Lo19NjaG	187.17	170.72	74.52	100.65	69.31				64	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115			
30	Lo20NjaG	128.66	115.31	45.87	66.88	42.43				59	Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	P-179114-115			
31	Lo21MakG	98.69	88.05	38.82	48.38	34.96					Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859			
32	Lo22MakG	69.95	61.81	27.09	33.72	23.81					Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859			
33	Lo23MakG	33.91	29.89	15.11	13.96	13.18					Gabon	Ivindo	Nzingmeyong, Iv	0.58	12.87	178859			
34	Lo24OIG	74.25	67.21	29.94	37.1	27.36					Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659			
35	Lo25OIG	63.08	56.03	23.66	30.81	21.97					Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659			
36	Lo26OIG	70.84	63.8	28.68	37.46	26.15					Cameroon	Nyong or Dja	Olounou, beek N	2.82	12.13	73-16-P-6651-659			
37	Lo27NjG	220.81	197.47	75.96	113.33	71.59					Cameroon	Sangha	Kombetiko, riv. f	?	?	76-14-P-839			
38	Lo28NjG	228.75	206.53	85.66	119.63	75.57				65	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313			
39	Lo29NjG	210.73	189.61	76.59	109.59	68.77				63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313			
40	Lo30NjG	140.42	126.05	55.18	70.78	48.19				63	Cameroon	Nyong	Ebogo, riv. Nyor	3.38	11.47	73-18-P-3311-3313			
41	Lo31NjaG	62.18	53.11	25.01	26.94	21.87					Gabon	Nyanga	Tchibanga, riv. N	-2.85	11.03	179086-110			

La structure de la base de données – données modifiées

Générale

- Données modifiées = données dérivées à partir de la base de données originale, avec les mensurations (et méristiques) originales.
- Par exemple: la transformation logarithmique (LOG) et les pourcentages (%LS = longueur standard, %LT = longueur de la tête), les deux seulement pour les mensurations; les méristiques ne sont pas transformées.
- PAST permet la transformation LOG d'une base de données importée, mais pas le calcul des pourcentages; les pourcentages doivent être calculés avant importation dans PAST.
- Les mensurations et les méristiques sont analysées séparément.

La structure de la base de données – données modifiées

Modifier les données avec Excel:

- Worksheet 1 = données originales; worksheet 2 = %LS; worksheet 3 = %LT; worksheet 4 = LOG; transformation LOG peut être faite avec PAST; seulement les mensurations sont transformées (LOG ou pourcentages), les méristiques jamais.
- En utilisant des formules dans les worksheets 2 et 3, des corrections des données originales sont directement appliquées dans ces worksheets.

%LS: $(\text{variable}/\text{LS}) * 100$
%LT: $(\text{variable}/\text{LT}) * 100$
- Les colonnes avec l'information additionnelle dans worksheet 1 peuvent être exclues des autres worksheets.
- Evitez des modifications des données dans PAST (sauf transformation logarithmique); faites-les dans le fichier Excel.

PAST: entrer des données

1) Excel: Sélectionnez et copiez les données originales (mesurations ou méristiques, pas l'information additionnelle)

The screenshot shows the PAST software interface with a data table. The table has columns for 'Type', 'Color', 'Symbol', 'Name', and variables A through I. The 'Name' column is highlighted in green, and the 'Name - Name' cell is selected. A red box highlights the 'Row attributes' and 'Column attributes' checkboxes in the top menu. A green box highlights the 'Name - Name' cell. A red arrow points from the 'Row attributes' checkbox to the 'Name - Name' cell.

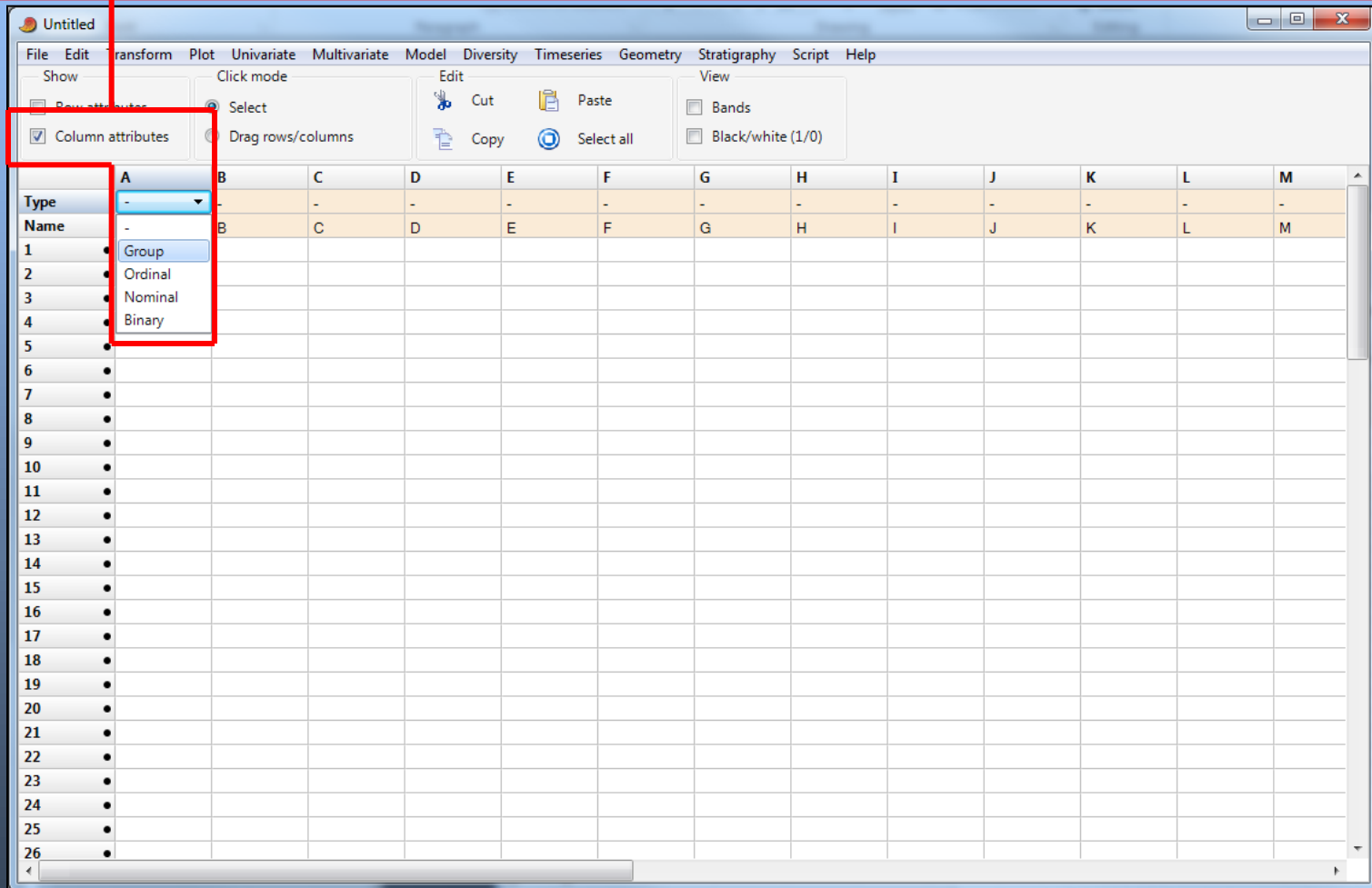
2) PAST: Marquez « Row attributes » et « Column attributes »

3) Sélectionnez la cellule « Name – Name » et collez les données copiées pour ajouter les codes des spécimens et des variables dans la première colonne et rangée de PAST

Type	Color	Symbol	Name	A	B	C	D	E	F	G	H	I
Name			Name	A	B	C	D	E	F	G	H	I
1		Dot	1									
2		Dot	2									
3		Dot	3									
4		Dot	4									
5		Dot	5									
6		Dot	6									
7		Dot	7									
8		Dot	8									
9		Dot	9									
10		Dot	10									
11		Dot	11									
12		Dot	12									
13		Dot	13									
14		Dot	14									
15		Dot	15									
16		Dot	16									
17		Dot	17									
18		Dot	18									
19		Dot	19									
20		Dot	20									
21		Dot	21									
22		Dot	22									
23		Dot	23									
24		Dot	24									
25		Dot	25									
26		Dot	26									

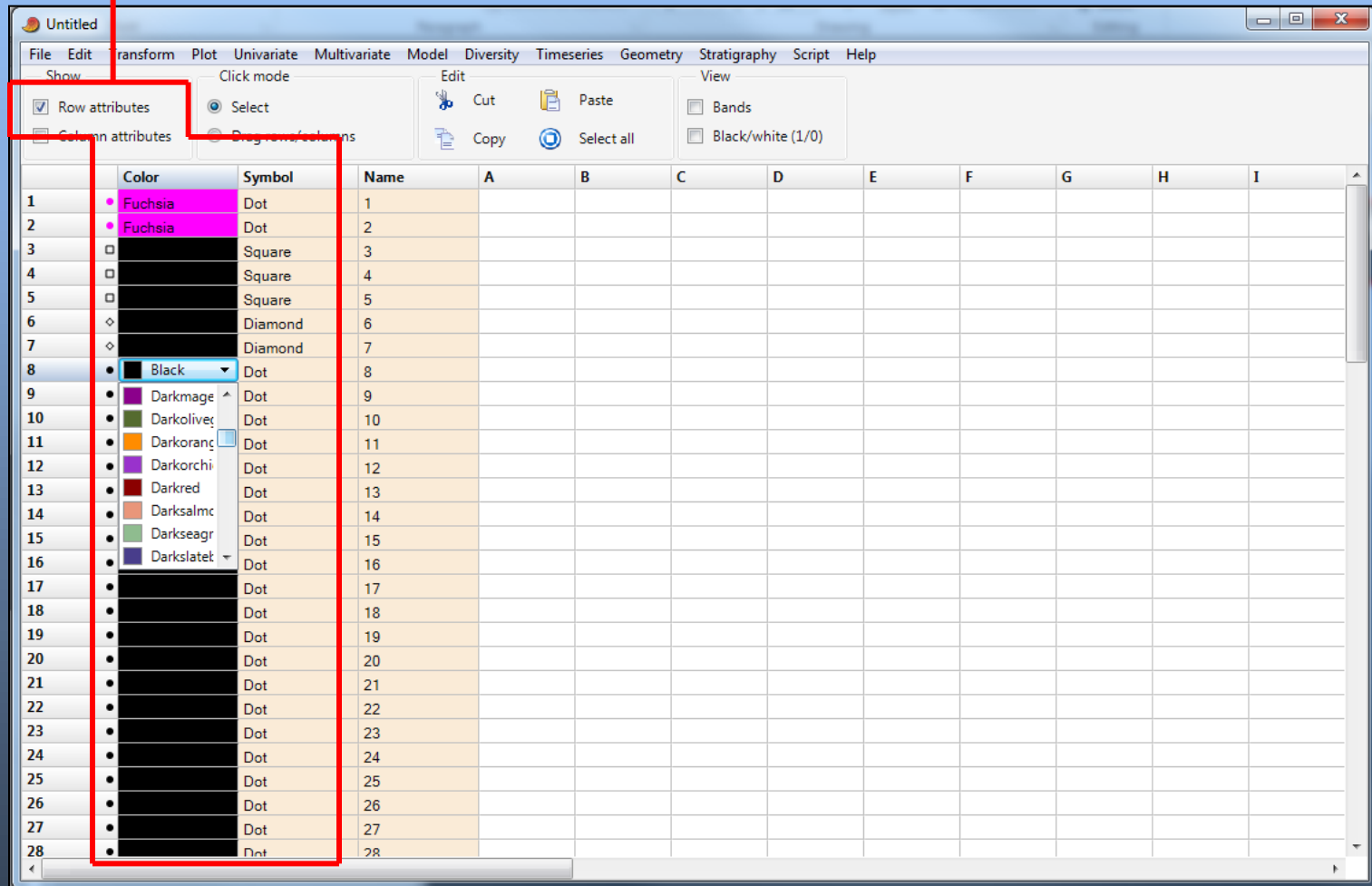
PAST: entrer des données

Des groupes de spécimens peuvent être spécifiés en identifiant une colonne comme « Group » et remplissant la valeur (comme texte, p. ex. « male » ou « femelle », ou comme valeur, p. ex. groupe « 1 », « 2 », « 3 », etc.)



PAST: entrer des données

Les symboles (et ses couleurs) des différents groupes, qui seront utilisés dans les graphiques, peuvent être spécifiés



PAST: entrer des données

Alternativement, sélectionnez les spécimens du même groupe et choisissez « Edit – Row colors/symbols »

The screenshot shows the PAST software interface with a data table and a dialog box. The 'Edit' menu is open, and 'Row colors/symbols ...' is highlighted. A red arrow points from this menu item to the 'Row colors/symbols' dialog box. The dialog box has a table with columns 'Group', 'Color', and 'Symbol'. The 'All' group is selected, with a black color and a dot symbol. The background data table has columns SNL, PGW, OD, DSL, HPL, ABL, AMH, PMW, and MW.

	SNL	PGW	OD	DSL	HPL	ABL	AMH	PMW	MW
100u	21.4	43.9	10.5	54.3	40	68.7	16.9	10.5	17.1
110u	25.6	42.2					20	10.3	15.8
120u	24.2	44.4					18.5	8.1	15.9
13Be	17.8	30.1					10.2	7.3	11.7
14Be	14.4	28.1					10	5.8	10.3
15Be	14.4	28.1					10.4	7	11.1
16Be	17.2	30.1					12.5	8	13.4
17Be	13	22.1					6.6	6.7	11.1
18Be	13.7	24.1					9.4	7.5	12.8
19Na	16.3	31.1					10.9	7.6	11.6
15e1	18	33.1					10.1	8.1	13.8
20Na	14.6	29.1					9.6	6.9	11.2
21Bf1	63.8	21.6	25.7	7.2	9.1	15.1	3.8	3.6	6.8
22Bf1	59.4	18.8	23.1	5.8	8.2	15.1	4.5	3.5	7
23Bf1	59.8	19.9	24.3	6.1	8	15.1	5	3.7	6.5
24Bf1	60.1	19.5	24.3	6.3	8.8	15.1	4.4	3.8	7.1
25Bf1	61.5	20	24.9	6.4	8.6	15.1	4.2	4.2	6.4
26Bf1	50.7	17.5	21.2	5.8	7.7	13.1	4	3.7	5.7
27Bf2	80.9	26.2	33	7.5	12.5	20.4	6.4	6.8	10.9
28Gh1	45.5	14.7	18.2	5.2	6.6	12.8	2.7	3.2	5.9
29MII	40	14.5	19	4.9	6.1	12	3.9	3.2	5.6
2Ca1	140.3	44.9	59.4	14.4	20	34.7	15.2	8.1	15.1
30Be2	60.7	20.3	26.2	6.9	9.1	16.7	5.5	4.5	6.8
31Bf2	103.5	34	44.3	11.1	13.9	25.1	11.5	6.2	9.8
32Bf2	113.8	37.1	48.2	13.4	15.7	30.8	12.5	7.2	11.6
33Na3	27.9	11.4	13.6	4	4.9	8.4	2	2.6	3.7
34Na4	40.4	14.9	18.3	4.9	6.1	12.2	3	3.1	5.5
35MII	37.4	13.8	17.4	4.9	5.6	11	4.9	3	5.1

PAST: transformation logarithmique

1) Sélectionnez les données à transformer (= tous les mesures)

2) Choisissez « Transform - Log »

Notez que la transformation ne sera pas faite quand il y a des cellules vides dans la sélection; remplacez-les par « ? », ou supprimez le spécimen/variable; valeurs manquants ≠ zéro !

	INL	SNI	FGW	OD	PSL	PPL	ABL	AMH	PMW	MW			
100u1	20.2								10.5	17.1			
110u1	24.3								10.3	15.8			
120u1	23.5	24.2	44.4	10.1	60.4	50	60.9	18.5	8.1	15.9			
13Bé1	14.1	17.8	30.6	7.7	37.9	27.3	42	10.2	7.3	11.7			
14Bé1	10.7	14.4	28.6	8.5	34.2	25.6	41.3	10	5.8	10.3			
15Bé1	12.1	14.4	28.4	8.1	31.5	28.3	40	10.4	7	11.1			
16Bé2	108.4	37.1	46.3	12.2	17.2	30.1	7.6	25.8	23.7	38.7	12.5	8	13.4
17Bé2	85.3	28.7	35.2	9	13	22.4	6.2	23.5	17.2	29.8	6.6	6.7	11.1
18Bé2	93	29.8	37.1	9.5	13.7	24.8	6.8	25.1	21.9	31.2	9.4	7.5	12.8
19Na2	126.2	41	52.4	13.9	16.3	31	8.8	39.4	26	41.4	10.9	7.6	11.6
15é1	139.1	43.6	55.7	14.7	18	33.4	8.9	40.5	29.9	43.4	10.1	8.1	13.8
20Na2	115	36.5	47.1	12.5	14.6	29.9	8.2	33.1	24.5	38	9.6	6.9	11.2
21Bf1	63.8	21.6	25.7	7.2	9.1	15.7	3.8	15.7	12.2	19.4	3.8	3.6	6.8
22Bf1	59.4	18.8	23.1	5.8	8.2	15.1	3.7	14.2	11.8	19.6	4.5	3.5	7
23Bf1	59.8	19.9	24.3	6.1	8	15.5	3.8	17.7	11.9	16.9	5	3.7	6.5
24Bf1	60.1	19.5	24.3	6.3	8.8	15.5	4	15.3	12.1	19.8	4.4	3.8	7.1
25Bf1	61.5	20	24.9	6.4	8.6	15.8	3.9	16.2	11.8	19.6	4.2	4.2	6.4
26Bf1	50.7	17.5	21.2	5.8	7.7	13.8	3.6	12.3	10.6	16	4	3.7	5.7
27Bf2	80.9	26.2	33	7.5	12.5	20.4	6.8	19.9	15.4	26.4	6.4	6.8	10.9
28Gh1	45.5	14.7	18.2	5.2	6.6	12.8	3.1	9.25	9.6	11.8	2.7	3.2	5.9
29MII	40	14.5	19	4.9	6.1	12	3.4	9.7	8.7	13.3	3.9	3.2	5.6
30Bé2	80.7	20.3	26.2	6.9	9.1	16.7	4.6	15.2	13	17.7	9.5	4.5	6.6
32Bf2	113.6	37.1	46.2	13.4	15.7	30.8	7.7	26.7	26.7	36.5	12.5	7.2	11.6
33N2	4	4.9	8.4	2.3	6.1	7.6	8.1	8.1	2	2.6	3.7		
34N4	4.9	6.1	12.2	2.8	8.7	8.1	13.7	3	3.1	5.5			
35MII	37.4	13.8	17.4	4.9	5.6	11	3	8.3	8.2	13	4.9	3	5.1

PAST: X/Y Scatterplots (nuage de points)

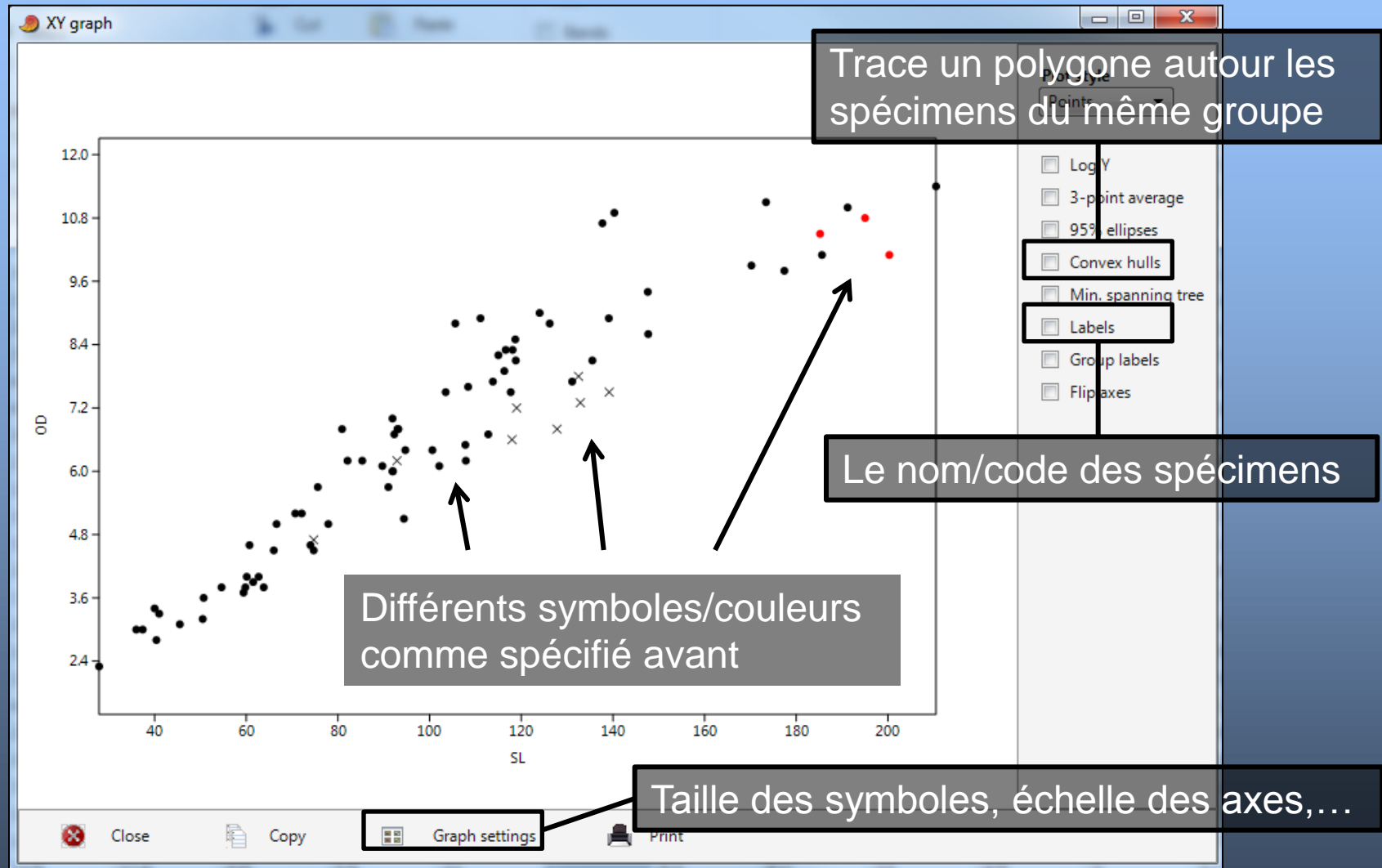
1) Sélectionnez les deux colonnes

The screenshot shows the PAST software interface. The main window has a menu bar with 'Plot' selected. A dropdown menu is open, showing 'XY graph' as the first option. A secondary window titled 'XY graph' is open, displaying a scatter plot of OD (Y-axis) versus SL (X-axis). The plot shows a positive correlation between the two variables. The 'Plot style' panel on the right of the secondary window has 'Points' selected. A green box highlights the 'XY graph' option in the menu and the 'XY graph' window title. A red box highlights the '1) Sélectionnez les deux colonnes' instruction, with arrows pointing to the 'SL' and 'OD' columns in the main data table.

	SL	SNL	PGW	OD	DSL
100u1	185.2	21.4	43.9	10.5	54.3
110u1	195	25.6	42.1	10.8	49.6
120u1	200.3	24.2	44.4	10.1	60.4
13Bé1	131.1	17.8	30.6	7.7	37.9
14Bé1	118.7	14.4	28.6	8.5	34.2
15Bé1	118.8	14.4	28.4	8.1	31.5
16Bé2	108.4	17.2	30.1	7.6	25.8
17Bé2	85.3	13	22.4	6.2	23.5
18Bé2	93	13.7	24.8	6.8	25.1
19Na2	126.2	16.3	31	8.8	39.4
15é1	139.1	18	33.4	8.9	40.5
20Na2	115	14.6	29.9	8.2	33.1
21Bf1	63.8	21.6	25.7	7.2	15.7
22Bf1	59.4	18.8	23.1	5.8	14.2
23Bf1	59.9	19.9	24.3	6.1	17.7
24Bf1	59.9	19.9	24.3	6.1	15.5
25Bf1	59.9	20	24.5	6.4	15.8
26Bf1	59.7	17.5	21.2	5.8	13.8
27Bf2	80.9	26.2	33	7.5	20.4
28Gh1	45.5	14.7	18.2	5.2	12.8
29M11	40	14.5	19	4.9	6.1
2Ca1	140.3	44.9	59.4	14.4	20
30Bé2	60.7	20.3	26.2	6.9	9.1
31Bf2	103.5	34	44.3	11.1	13.9
32Bf2	113.8	37.1	48.2	13.4	15.7
33Na3	27.9	11.4	13.6	4	8.4
34Na4	40.4	14.9	18.3	4.9	6.1
35M11	37.4	13.8	17.4	4.9	5.6

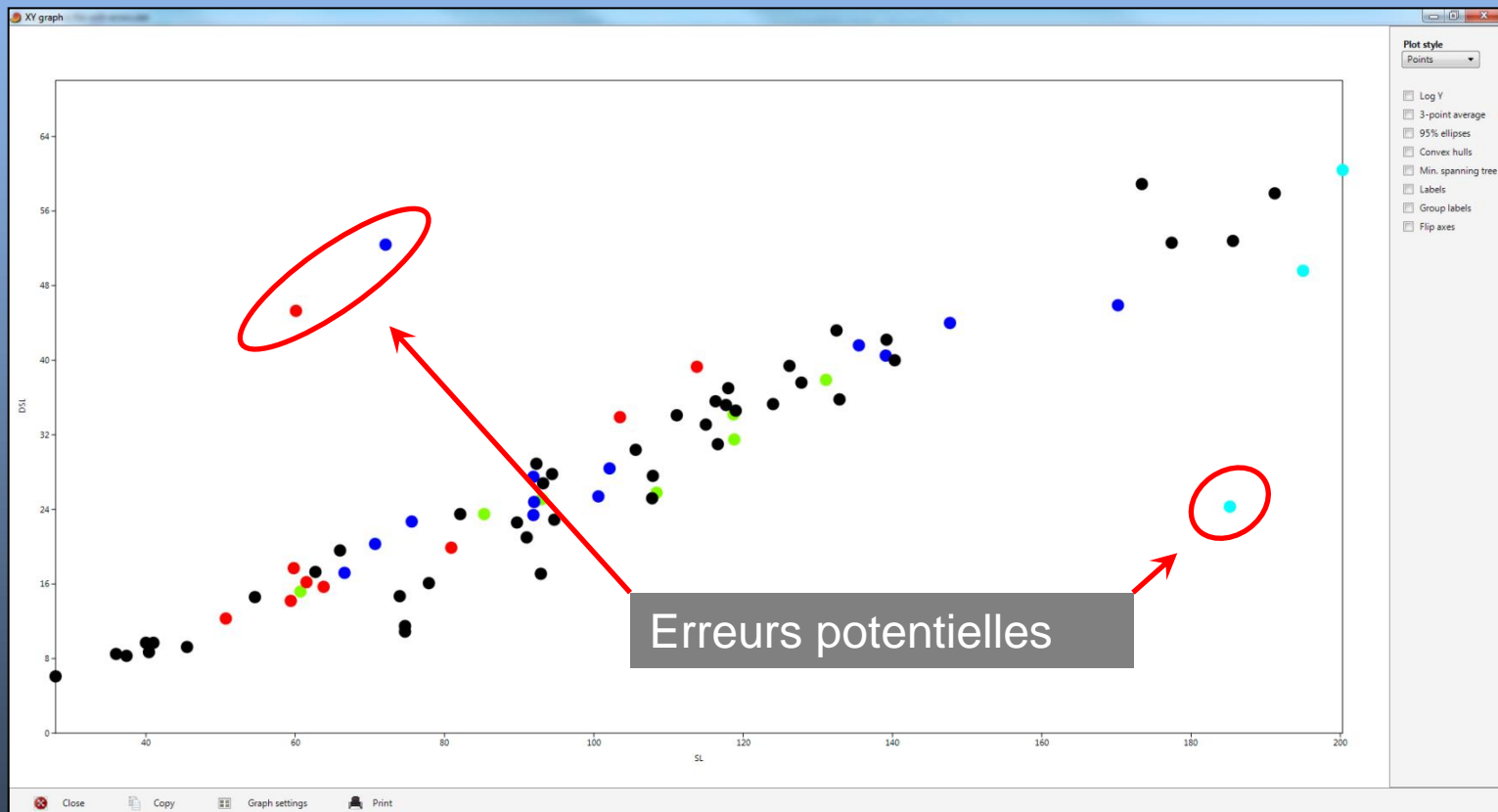
2) Choisissez « Plot – XY graph »

PAST: X/Y Scatterplots (nuage de points)



PAST: chercher des erreurs de mesure

- Les erreurs de mesure deviennent claires après une ACP: un spécimen isolé et un grand *factor loading* indiquent quelle mensuration est incorrecte chez quel individu.
- Le premier contrôle, en faisant des scatterplots de toutes les variables opposé à LS (ou LT) peut déjà identifier des erreurs frappantes:



PAST: analyse en composantes principales

- Avant d'effectuer les ACPs, il faut calculer le logarithme ou %SL (ou %LT) des données morphométriques; les méristiques ne sont jamais transformées.

The image shows a screenshot of the PAST software interface. The main window displays a data table with columns for species (e.g., 100u1, 110u1, 120u1, 13Bé1, 14Bé1, 15Bé1) and morphometric variables (SL, HL, AB, AMH, PMW, MW). A red box highlights the first few rows of data, with the text "1) sélectionnez toutes les données" (1) select all data" overlaid. A green box highlights the "Multivariate" menu, with a sub-menu open showing "Principal components (PCA)" selected. A green arrow points from this menu to a text box that says "2) Choisissez « Multivariate – Ordination – Principal components (PCA) »" (2) Choose « Multivariate – Ordination – Principal components (PCA) »). Below the main window, a smaller window titled "Principal components analysis" is open, showing a table of eigenvalues and variances for 16 principal components. The table has columns for PC, Eigenvalue, and % variance. The first component (PC 1) has an eigenvalue of 0.932095 and accounts for 94.139% of the variance. The second component (PC 2) has an eigenvalue of 0.0211009 and accounts for 2.1311% of the variance. The table continues down to PC 16, which has an eigenvalue of 0.00049576 and accounts for 0.05007% of the variance. The PCA window also shows options for Matrix (Variance-covariance), Groups (Disregard), Missing values (Mean value imputation), and Bootstrap N (0).

1) sélectionnez toutes les données

2) Choisissez « Multivariate – Ordination – Principal components (PCA) »

PC	Eigenvalue	% variance
1	0.932095	94.139
2	0.0211009	2.1311
3	0.0088566	0.89449
4	0.0066403	0.67065
5	0.0041778	0.42195
6	0.0031593	0.31908
7	0.0029321	0.29614
8	0.0018185	0.18367
9	0.0015414	0.15568
10	0.0013087	0.13218
11	0.0012195	0.12317
12	0.0009403	0.094972
13	0.0008008	0.080881
14	0.0007194	0.072665
15	0.0005307	0.053601
16	0.0004957	0.05007

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Utilisez la matrice "Var-covar" si tous les variables utilisent la même unité (mensurations); ou la matrice "correlation" si différentes unités sont utilisées (méristiques).

"Eigenvalues" donnent le degré de la variation totale de la base de données expliqué par la composante principale correspondante.

"% variance" explique le pourcentage de la variation totale de la base de données expliqué par la composante principale correspondante.

PC	Eigenvalue	% variance
1	0.932095	94.139
2	0.0211009	2.1311
3	0.0088566	0.89449
4	0.0066403	0.67065
5	0.0041778	0.42195
6	0.0031593	0.31908
7	0.0029321	0.29614
8	0.0018185	0.18367
9	0.0015414	0.15568
10	0.0013087	0.13218
11	0.0012195	0.12317
12	0.0009403	0.094972
13	0.0008008	0.080881
14	0.0007194	0.072665
15	0.0005307	0.053601
16	0.0004957	0.05007

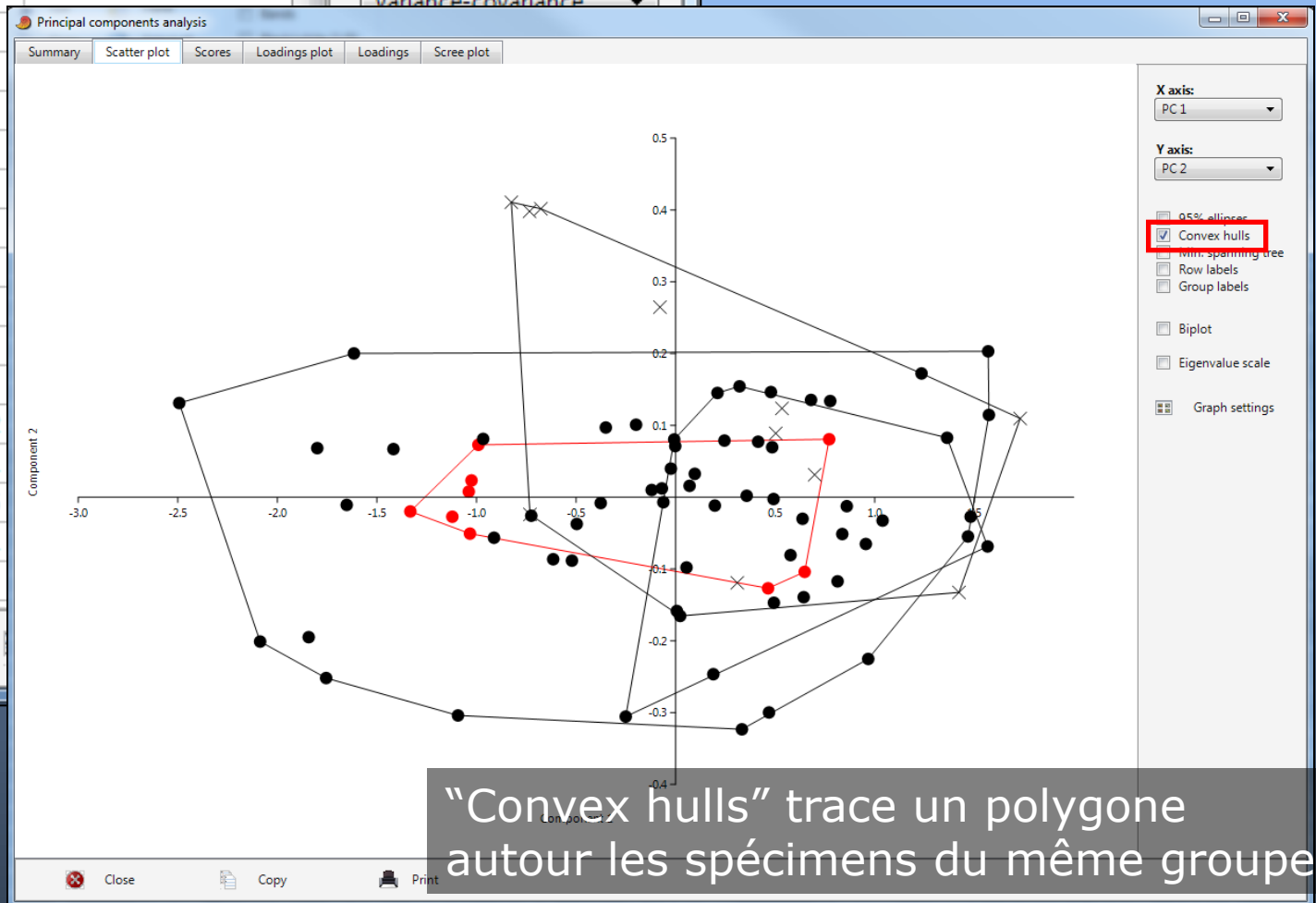
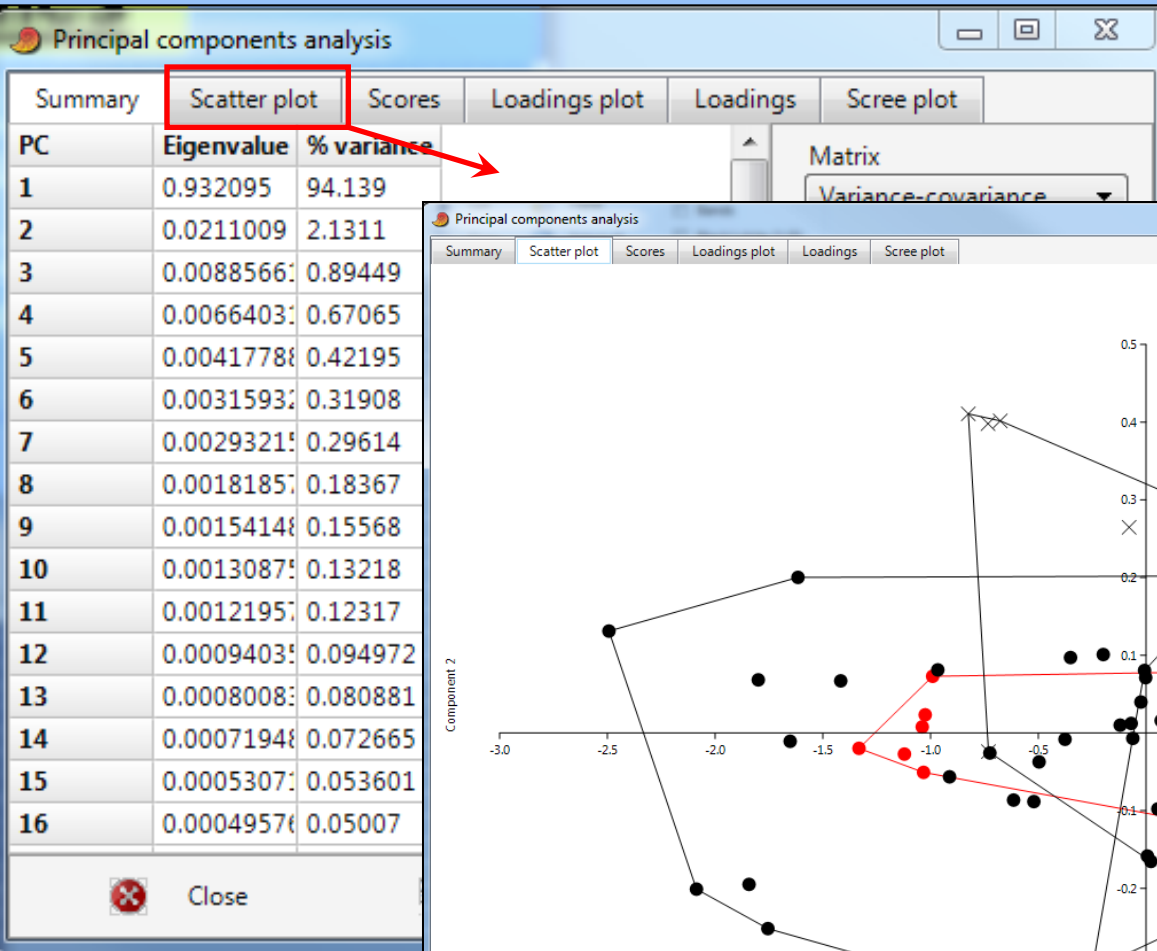
La plupart de la variation est normalement expliquée par les premières composantes principales.

PAST: analyse en composantes principales

Chaque méthode qui tient compte des valeurs manquants (les « ? » dans la base de donnée) influencera les ACP; il faut de préférence exclure le spécimen ou le variable de l'analyse, sinon choisissez « Iterative imputation » au lieu de « Mean value imputation »

PC	Eigenvalue	% variance
1	0.932095	94.139
2	0.0211009	2.1311
3	0.00885001	0.89449
4	0.0047786	0.48265
5	0.00315087	0.31908
6	0.00293215	0.29614
7	0.00181857	0.18367
8	0.00154148	0.15568
9	0.00130875	0.13218
10	0.00121957	0.12317
11	0.00094035	0.094972
12	0.00080083	0.080881
13	0.00071948	0.072665
14	0.00053071	0.053601
15	0.00049576	0.05007
16		

PAST: analyse en composantes principales



“Convex hulls” trace un polygone autour des spécimens du même groupe

PAST: analyse en composantes principales

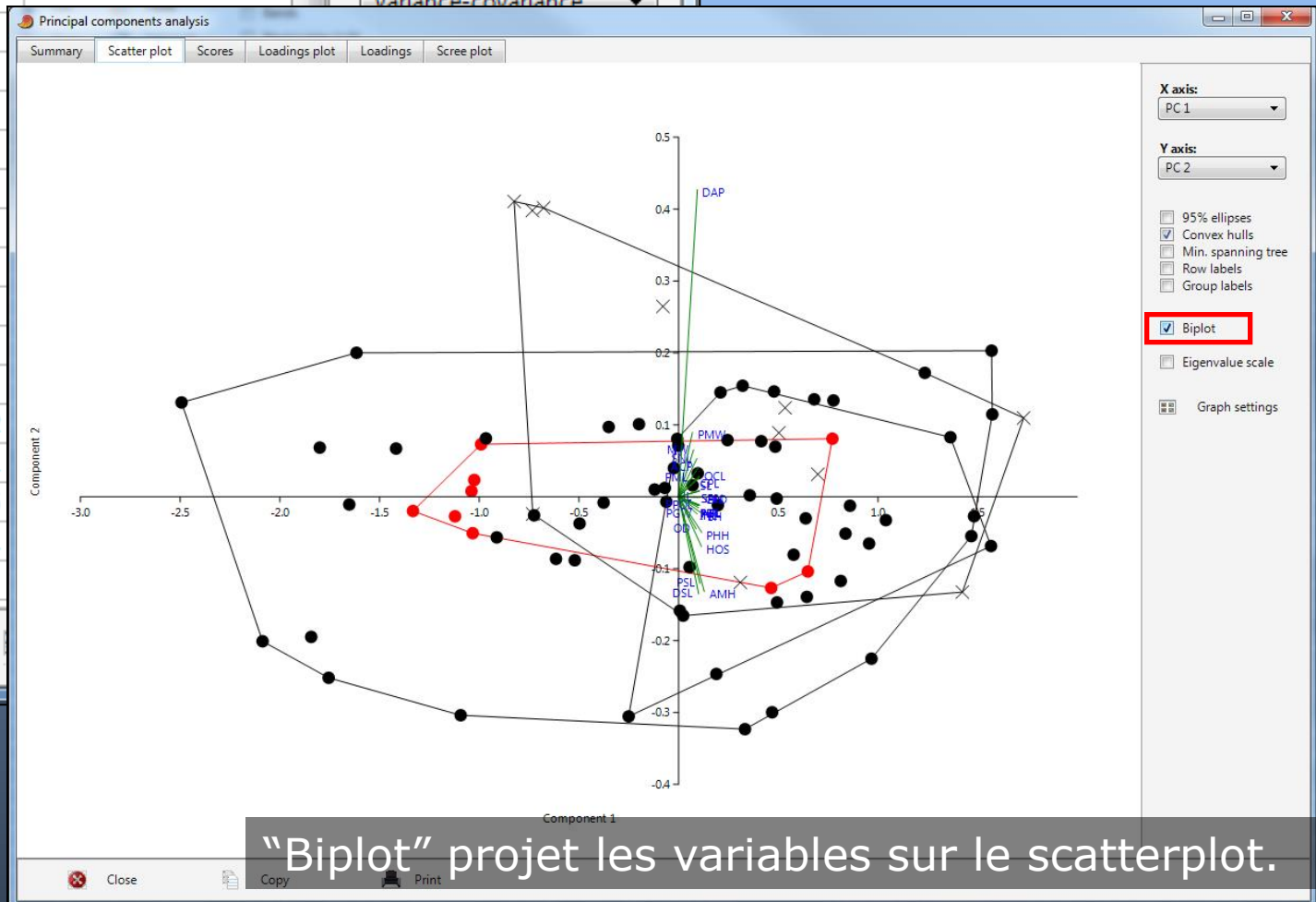
Principal components analysis

Summary Scatter plot Scores Loadings plot Loadings Scree plot

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1	0.932095	94.139
2	0.0211009	2.1311
3	0.0088566	0.89449
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6	0.0031593	0.31908
7	0.0029321	0.29614
8	0.0018185	0.18367
9	0.0015414	0.15568
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15	0.0005307	0.053601
16	0.0004957	0.05007

Matrix
Variance-covariance

Close



PAST: analyse en composantes principales

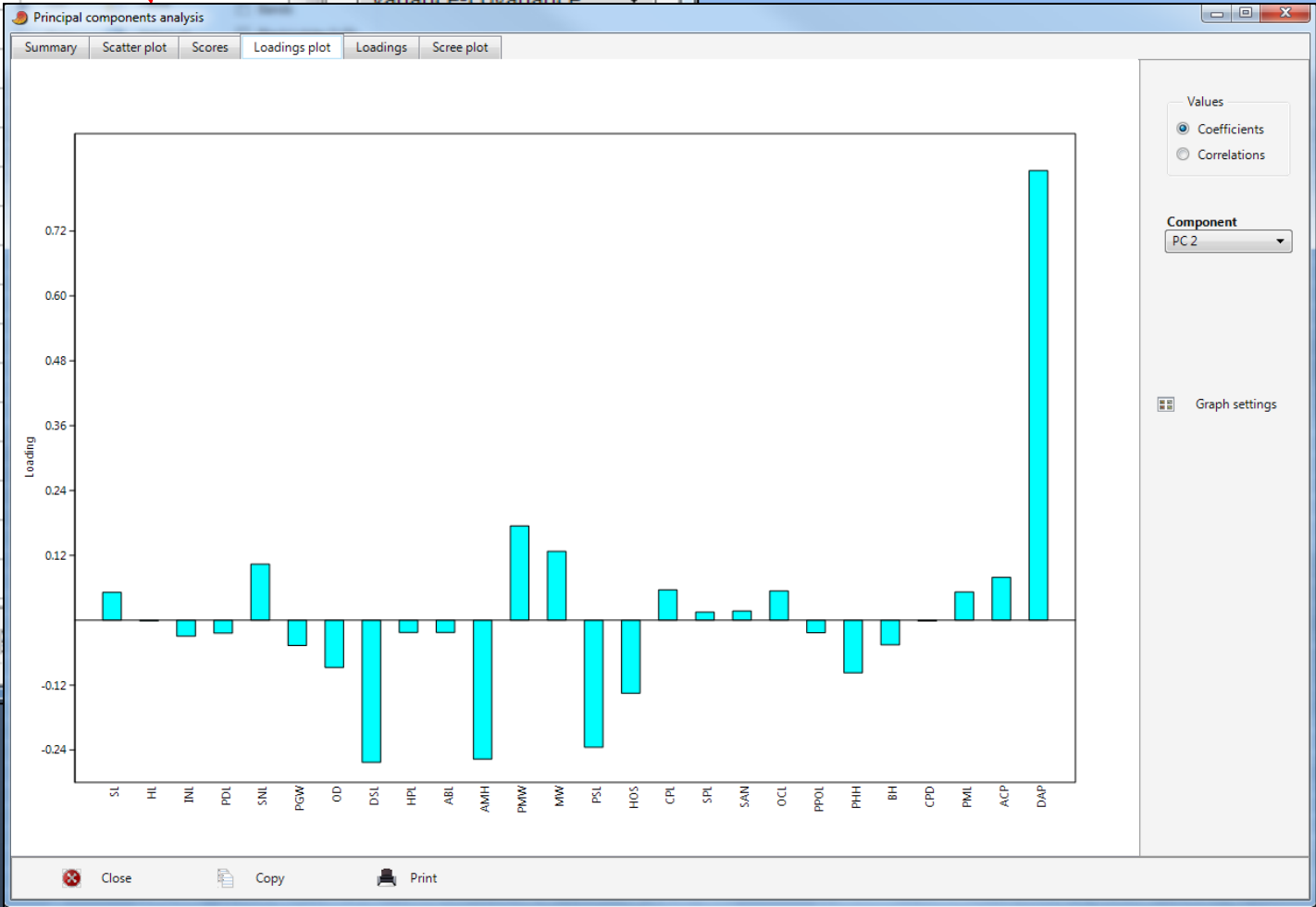
Principal components analysis

Summary Scatter plot Scores **Loadings plot** Loadings Scree plot

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Matrix
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PAST: analyse en composantes principales

Principal components analysis

Summary Scatter plot Scores Loadings plot **Loadings** Scree plot

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Matrix
Variance-covariance

Close

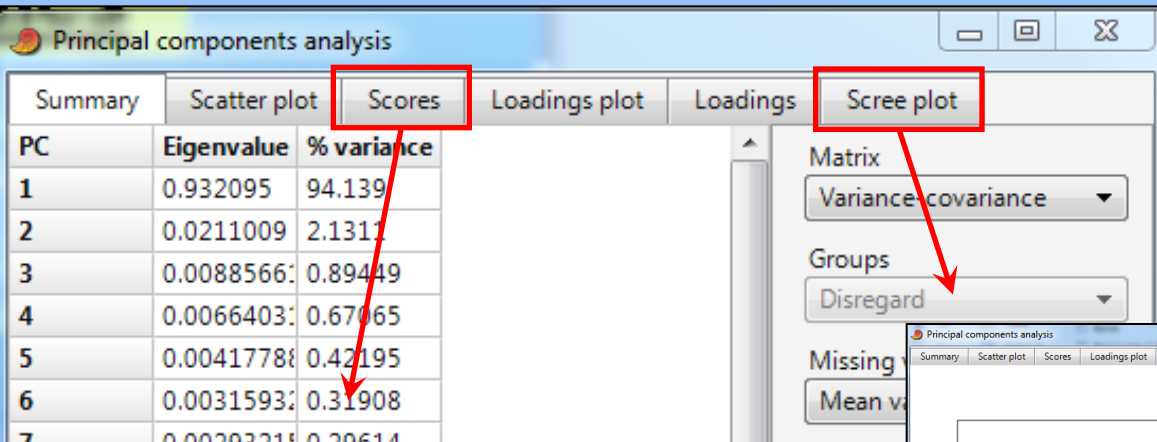
Principal components analysis

Summary Scatter plot Scores Loadings plot Loadings Scree plot

	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8	PC 9	PC 10	PC 11	PC 12	PC 13	PC 14	PC
SL	0.19985	0.051599	0.024922	0.059151	0.036897	-0.12557	-0.068117	-0.034024	0.055952	0.012618	-0.17281	-0.14917	0.045589	-0.025548	-0.
HL	0.18544	-0.0010172	0.04924	-0.025745	0.054117	-0.0044926	0.015208	0.076226	0.1116	0.1185	0.0095561	-0.052437	0.098388	-0.024802	-0.
INL	0.19473	-0.02949	0.036952	-0.14262	0.036442	-0.043597	-0.011575	0.23573	0.14222	0.3881	0.30335	-0.065894	-0.32546	0.25531	0.0
PDL	0.19505	-0.023785	0.045613	-0.046756	0.03289	-0.021425	0.0058785	0.099638	0.19099	0.13464	0.067229	-0.010219	-0.017972	0.042	-0.
SNL	0.17848	0.10388	0.046446	0.091997	0.14763	0.011534	0.12457	0.027288	-0.014653	0.26837	-0.10812	0.044756	-0.053382	-0.0026861	0.0
PGW	0.1799	-0.046559	0.029383	-0.060185	0.0090993	-0.034566	0.030224	0.17856	-0.007743	0.16078	-0.17197	-0.0097078	-0.033165	0.017254	0.1
OD	0.16976	-0.08723	0.083035	0.15137	0.03569	0.045919	0.11195	0.33718	0.20711	-0.6467	0.28985	-0.14733	0.28112	0.11925	0.2
DSL	0.19464	-0.26272	-0.91423	0.17285	-0.02571	-0.063543	0.0051557	-0.016201	-0.044683	0.060997	0.095368	-0.0054751	0.054126	-0.028301	0.0
HPL	0.20401	-0.022447	0.044289	-0.092923	0.083809	-0.0090176	0.014194	0.095414	0.40213	-0.002352	0.11863	0.093871	-0.26593	-0.42607	0.1
ABL	0.2045	-0.022461	0.041129	0.20066	-0.10214	-0.17385	-0.030951	-0.11954	0.040521	-0.21619	-0.30568	-0.029585	-0.087207	-0.17145	0.1
AMH	0.25045	-0.25684	0.095423	-0.16086	-0.48969	0.46138	0.43434	-0.06845	-0.22179	0.0042281	0.028229	-0.25507	-0.10492	-0.209	-0.
PMW	0.13508	0.17448	0.064492	0.4929	0.1458	-0.040658	0.46785	0.011594	0.086028	0.039196	0.23478	0.22122	-0.13657	0.063283	-0.
MW	0.14623	0.12753	0.07681	0.34072	0.020115	-0.053133	0.27245	-0.10378	-0.29523	0.051554	-0.14253	0.22139	0.049722	-0.0070669	0.1
PSL	0.20785	-0.23481	0.041714	-0.21274	0.7091	0.3266	0.045492	-0.42975	-0.089579	-0.083081	0.074475	0.0055173	0.090022	0.057275	-0.
HOS	0.22316	-0.135	0.0020052	-0.1015	-0.20527	-0.10355	-0.06933	-0.29316	0.44136	-0.17214	-0.12218	0.12539	-0.093459	0.22472	-0.
CPL	0.20169	0.056177	0.068552	0.16646	0.036681	-0.20686	-0.22152	-0.21299	-0.27611	-0.13249	0.10218	-0.51622	-0.46239	0.16835	0.1
SPL	0.20391	0.015135	0.061671	-0.015564	0.023734	-0.10962	-0.023354	0.0087458	-0.02177	0.089275	-0.18644	-0.072496	0.29125	-0.10387	-0.
SAN	0.20598	0.017201	0.062361	0.029932	0.036435	-0.096371	-0.013933	-0.006676	0.034191	0.13625	-0.19751	-0.13691	0.31207	-0.18521	-0.
OCL	0.20409	0.05432	0.035361	0.0358	0.033703	-0.17858	-0.055652	-0.07336	0.10708	-0.0091601	-0.15456	-0.14483	0.03931	-0.093037	-0.
PPOL	0.18677	-0.023016	0.036721	-0.10981	0.011491	-0.043042	0.007038	0.24384	-0.033023	0.23474	0.049281	-0.18469	0.34998	0.14693	0.2
PHH	0.22592	-0.097183	-0.042458	-0.20512	0.17731	0.010787	-0.090332	0.5119	-0.34162	-0.27326	-0.32221	0.32784	-0.30551	-0.01948	-0.
BH	0.22942	-0.045507	0.056519	-0.11523	-0.26123	0.022398	-0.10294	-0.28165	0.051015	0.013982	0.013762	0.49757	0.015656	0.16143	0.5
CPD	0.21453	-0.0012371	0.087546	-0.04314	-0.17316	-0.10265	-0.059991	0.00063017	-0.25405	-0.020802	0.10612	0.11504	0.19661	0.50541	-0.
PML	0.13601	0.052399	0.055483	0.47009	-0.065221	0.62372	-0.56495	0.099168	0.061244	0.10707	-0.020077	0.04224	0.01842	-0.0071823	-0.
ACP	0.19313	0.079437	0.09888	-0.085755	-0.24064	-0.2785	-0.082366	-0.30594	-0.020796	0.5555	0.19613	0.12701	-0.46615	-0.	
DAP	0.18241	0.83158	-0.2876	-0.30219	-0.028453	0.2311	0.064276	-0.05506	0.031494	-0.1526	-0.011224	-0.064569	0.0047252	0.033237	0.0

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	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7
1Sé1	1.363	0.082766	-0.061385	0.12042	-0.2072	-0.18513	0.00000
2Ca1	1.5729	0.1146	-0.040986	-0.092898	0.031919	-0.0024534	0.00000
3Ca1	1.5692	0.20322	0.24124	-0.1556	0.040469	0.034723	-0.00000
4Sé2	0.63715	-0.030044	-0.062984	0.021974	0.1028	-0.0011704	-0.00000
5MI1	0.33263	-0.32317	0.16915	0.065537	0.072083	-0.074643	-0.00000
6Ca2	0.48445	0.069634	-0.059875	-0.091033	0.05845	-0.03868	0.00000
7Ca2	0.41414	0.077285	0.055081	0.10004	-0.044488	0.11452	0.00000
8Sd1	-0.19904	0.10093	-0.036909	0.0499	0.10576	-0.040193	0.00000
9Rc1	-0.0020793	0.071239	-0.014971	0.091514	0.043171	0.061123	0.00000
10Ou1	0.64777	-0.10394	-0.052331	-0.022989	0.077195	-0.11917	0.00000
11Ou1	0.77067	0.080715	-0.061376	0.086616	-0.038597	-0.14293	-0.00000
12Ou1	0.46386	-0.12688	-0.002462	-0.0093231	0.03044	-0.083079	-0.00000
13Bé1	-0.99068	0.072944	-0.025396	-0.086318	0.064092	-0.09107	-0.00000
14Bé1	-1.1217	-0.027163	0.030768	-0.0040681	-0.032021	-0.01913	-0.00000
15Bé1	-1.0256	0.02335	-0.093468	-0.13052	-0.01971	0.017611	0.0051282
16Bé2	-1.0391	0.007856	0.00094595	-0.027041	0.0080786	-0.04275	-0.021481
17Bé2	-1.0332	-0.050747	-0.0036755	-0.0056298	0.059796	-0.066202	-0.031651
18Bé2	-1.3325	-0.019776	0.048119	0.008792	0.020499	0.072924	-0.089206
19Na2	-0.35077	0.097023	0.030824	0.18238	0.077633	0.085498	0.043523
							0.011799

